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Toshiyuki Nagaoka

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KENYON & KENYON LLP
1500 K STREET N.W.
SUITE 700
WASHINGTON, DC 20005

EXAMINER

NGUYEN, LUONG TRUNG

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/798,483	Applicant(s) NAGAOKA, TOSHIYUKI	
	Examiner LUONG T. NGUYEN	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-25 is/are pending in the application.
- 4a) Of the above claim(s) 3,5,7,9,10,13-15,17 and 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,4,6,8,11,12,18 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species X (Figure 10) in the reply filed on 06/04/2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 3, 5, 7, 9, 10, 13, 14, 15, 17, 19-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim.

It should be noted that Claims 3, 5, 7, 9, 10, 13, 14, 19-22 were withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 06/04/2007. And claims 15, 17 were withdrawn from the consideration since claims 15 and 17 do not read on elected Species X (Figure 10) as indicated in Office Action made on 8/21/2007.

In the Amendment filed on 12/20/2007, the Applicant amended the previously withdrawn claims 3, 5, 9, 10, 13, 14, 15, 17, 19-21. However, the amended claims 3, 5, 9, 10, 13, 14, 15, 17, 19-21 still do not read on elected Species X (Figure 10), therefore, these claims are still withdrawn from the consideration for the following reason.

Claim 3 reads on Species VI (Figures 6A-6B).

Claim 5 reads on Species V (Figure 5).

Claim 9 reads on Species IV (Figure 4).

Claim 10 reads on Species VII (Figures 7A-7B).

Claim 13 reads on Species III (Figure 3).

Claim 14 reads on Species II (Figure 2).

Claim 15 reads on Species VI (Figure 6).

Claim 17 reads on Species XI (Figure 11).

Claim 19 reads on Species VI (Figures 6A-6B).

Claim 20 reads on Species VI (Figures 6A-6B).

Claim 21 reads on Species I (Figure I, Specification, page 13).

Response to Arguments

3. Applicant's arguments filed on 12/20/2007 have been fully considered but they are not persuasive.

In re page 9, Applicant argues that as indicated on page 2, lines 18-21 of the present specification, an object of the present invention is to provide an imaging apparatus that achieves a variable focal length without a mechanically movable part. Therefore, the reflective element included in the imaging apparatus of the present invention does not have a mechanically movable part, and consists essentially of a fixedly positioned reflective surface. In contrast to the claimed feature, Stoneham discloses (as described in column 2, lines 59-65 and shown in FIGs. 2 and 3) that the reflective optical element is mechanically moved for switching between the paths of rays of the plural optical systems (long-focus lens 1', short-focus lens 3').

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (*i.e., an imaging apparatus that achieves a variable focal length without a mechanically movable part*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Instead, regarding claim 1, the Applicant amended claim 1 with limitation "a variable-transmittance element, and a reflective optical element consisting essentially of a reflective surface that is fixedly positioned, wherein a focal length of the imaging apparatus in its entirety is changed by controlling transmittance of the variable-transmittance element." The Examiner considers that claim 1 as amended still does not distinguish from Stoneham. Stoneham discloses a variable-transmittance element (combination of mirror 7' and aperture plane defining plate 17', figure 2, column 2, line 43 – column 3, line 36), and a reflective optical element consisting essentially of a reflective surface that is fixedly positioned (mirrors 5' is a fixed mirror, figure 2, column 2, lines 43-67), wherein a focal length of the imaging apparatus in its entirety is changed by controlling transmittance of the variable-transmittance element (the mirror 7' is movable for selecting longer focal length lens 1' or shorter focal length 3', figure 2, column 2, line 43 – column 3, line 36).

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required.

Claim 23 amended with limitation “A mobile article equipped with the imaging apparatus according to claim 1.” The specification fails to provide proper antecedent basis for limitation “mobile article.”

5. The disclosure is objected to because of the following informalities:

In the specification, page 28, line 8, “105 is a recording part” should be changed to --108 is a recording part--.

On page 27, line 30 and page 28, line 1, “a penetration variable element 101” should be changed to --a transmittance variable element 101--.

Appropriate correction is required.

Claim Objections

6. Claims 6, 24-25 are objected to because of the following informalities:

Claim 6 (line 4), “wherein the optical element with reflective function” should be changed to --wherein the at least one optical element with the reflective function--.

Claim 24 (line 3), “has reflective function” should be changed to --has another reflective function--.

Claim 25 (line 2), “a LCD” should be changed to --a liquid crystal element (LCD)--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

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7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 4, 6, 8, 11, 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Stoneham (US 4,801,958).

Regarding claim 1, Stoneham discloses an imaging apparatus comprising;

an imaging element (exposure plane 11', figure 2, column 2, lines 43-67),

plural optical systems having different focal lengths (lens 1' and lens 3', figure 2, column 2, lines 43-67),

a variable-transmittance element (combination of mirror 7' and aperture plane defining plate 17', figure 2, column 2, line 43 – column 3, line 36),

a reflective optical element consisting essentially of a reflective surface that is fixedly positioned (mirrors 5' is a fixed mirror, figure 2, column 2, lines 43-67),

wherein a focal length of the imaging apparatus in its entirety is changed by controlling transmittance of the variable-transmittance element (the mirror 7' is movable for selecting longer focal length lens 1' or shorter focal length 3', figure 2, column 2, line 43 – column 3, line 36).

Regarding claim 4, Stoneham discloses wherein each of the plural optical systems is arranged to be used with the imaging element (lens 1' and lens 3' are corresponding to the exposure plane 11', figure 2), and a center of an imaging area of the imaging element is

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substantially aligned with the optical axes of the plural optical systems (the center of the exposure plane 11' is aligned with the optical axis Z', figure 2).

Regarding claim 6, Stoneham discloses wherein the imaging apparatus has at least one optical element with reflective function, wherein the at least one optical element with the reflective function is configured so that an amount of light transmitted therethrough and an amount of light reflected therefrom are substantially equal (mirror 5' and mirror 7', each has reflective function, figure 2).

Regarding claim 8, Stoneham discloses the plural optical systems and the variable-transmittance element are arranged closely (lens 1' or lens 3', the mirror 7' and aperture plane defining plate 17' are arranged closely, figure 2).

Regarding claim 11, Stoneham discloses wherein the variable-transmittance element has a transmittance distribution (column 2, line 43 – column 3, line 47).

Regarding claim 12, Stoneham discloses wherein the variable-transmittance element is free from any portion that is mechanically displacing in a photographing action (the aperture plane defining plate 17' does not move, figure 2).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stoneham (US 4,801,958) in view of Ise et al. (US 5,471,339).

Regarding claim 18, Stoneham fails to disclose wherein the transmittance of the variable-transmittance element, which has been controlled for a photographing action, is reset to an initial state after the photographing action is completed. However, Ise et al. teaches the using of an electrochromic diaphragm 10 in an image pickup lens system 20 (figures 1, 3) for controlling the volume of light transmission of the light incident on CCD sensor 26. The light transmitting properties are changed by applying an electrical voltage onto electrochromic element which corresponds to reset a transmittance control to an initial state (column 1, lines 13-35; column 3, lines 30-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Stoneham by the teaching of Ise et al. in order to control volume of light transmission for the entire range of the visible light (column 1, lines 33-35).

11. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stoneham (US 4,801,958) in view of Rahim (US 5,155,683).

Regarding claim 23, Stoneham fails to disclose a mobile article equipped with the imaging apparatus according to claim 1. However, Rahim discloses vehicle V (mobile article) is equipped with camera 30 (imaging apparatus), which includes a variable-focal-length zoom lens as shown in figures 2, 5, column 6, lines 51-60, column 14, lines 65-68. Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to modify the device in Stoneham by the teaching of Rahim in order to allow an operator views a scene at a remote location.

12. Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoneham (US 4,801,958) in view of Yoshioka et al. (US 2001/0005232).

Regarding claim 24, Stoneham discloses wherein the imaging apparatus has plural reflective surfaces (mirrors 5' and 7', figure 2, column 2, lines 43-67), and one of the reflective surfaces has reflective function (mirror 5' has reflective function, figure 2) and another of the reflective surfaces has reflective function (mirror 7' has reflective function).

Stoneham fails to disclose another of the reflective surfaces has reflective function and transmitting function. However, Yoshioka et al. discloses a digital camera comprises a liquid crystal semi-transparent mirror 22, which has transmitting function and reflective function, figure 3, paragraphs [0043] - [0045]). Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to modify the device in Stoneham by the teaching of Yoshioka et al. in order to obtain an imaging apparatus, which simplifies light splitting device, rendering it more compact, and achieving low power consumption, paragraph [0043]).

Regarding claim 25, Stoneham fails to disclose wherein the variable-transmittance element comprises a LCD. However, Yoshioka et al. discloses a digital camera comprises a liquid crystal semi-transparent mirror 22, which has variable transmittance (figure 3, paragraph [0043]). Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to modify the device in Stoneham by the teaching of Yoshioka et al. in order to obtain an imaging apparatus, which simplifies light splitting device, rendering it more compact, and achieving low power consumption, paragraph [0043]).

Allowable Subject Matter

13. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID L. OMETZ can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David L. Ometz/
Supervisory Patent Examiner, Art Unit
2622

/L.T.N/
4/09/08